



## Number 1

### Care of Native California Oak Trees

Over the past several decades, many California native oaks have been disappearing from the urban and rural landscape, perhaps most notably *Quercus engelmannii* and *Q. agrifolia*. Of the various reasons advanced for this decline in the oak population, a few have been well documented, others are speculative.

Probably the most important cultural factor in the life of an oak tree has to do with watering methods. Native oaks have survived for hundreds of years under natural conditions without any artificial irrigation by man. But in urban areas where there has been a great increase in housing and commercial development, man, lacking adequate information, has employed the wrong methods in his attempt to preserve the oaks. Specifically, he has watered oak trees during the warm summer months, a period which is their natural dormant season. This practice - the combination of moisture and warm temperatures - creates good conditions for oak root rot (*Armillaria mellea*), a disease that has been largely responsible for the death of many native oaks.

Native California oaks do not normally need to be watered, but if rainfall during the winter and early spring months is below 18 inches, additional deep watering can be practiced from March through May. If watering of plants adjacent to the tree is necessary at any time, do not let the water hit the trunk of the tree. Ideally, ferns and other shade plants should not be planted under a native oak as the cultural requirements for the two are totally different. Also, ivy and other vines should not be allowed to climb up trees.

Any kind of grade change can seriously damage an oak tree. Generally, grading should take place only on the outside of the tree's dripline, which is the area that could be compared to the outer edge of an umbrella where water would drip off. If the soil level is to be raised, a well should be constructed around the oak so that soil does not come in contact with the tree trunk. The well should have a removable grating over it for safety and to allow air circulation around the trunk. The well should be large enough to permit a man to get down inside to clean it out occasionally. The point at which the roots meet the trunk (root crown) must be clear of soil or debris at all times. If the grade is to be lowered, be sure to stay on the outside of the dripline and avoid damaging any large roots. Even when there has been no change in grade of surrounding soil, it is important to clear away soil from the root crown. This can be accomplished by removing soil for a minimum of two feet completely around the tree, forming a saucer-shaped basin in which water will drain away from the tree. This area should be maintained free of plant growth and litter as well as soil.

Oak trees occasionally need fertilizing. In early spring, a high-nitrogen fertilizer such as 16-4-4 may be broadcast on the ground surface within the circle created by the dripline, at the rate of 10 pounds of fertilizer per 1,000 square feet and watered in. If the tree is surrounded by paving, tiles should be installed to permit watering and fertilizing. The tiles should be spaced about 10 feet apart around the circumference of the oak dripline.

Pruning of oak trees should be done in September or October and should be limited to the removal of dead or diseased limbs with no heavy pruning at any time.

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Insect pests should be identified and corrective measures taken. The most damaging insects in the area appear to be the oak twig girdler and the oak moth caterpillar. The oak twig girdler should be treated preventatively by spraying with Sevin in May. The oak moth caterpillar must be treated when it is actually present and damage is evident. Sevin will control it also. Directions on the label must be followed.

